



US 20050169422A1

(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2005/0169422 A1**
(43) **Pub. Date: Aug. 4, 2005**(54) **COMPUTED TOMOGRAPHY SYSTEM****Publication Classification**(75) Inventor: **Michael P. Ellenbogen**, Wayland, MA
(US)(51) **Int. Cl.⁷** **G01N 23/04**(52) **U.S. Cl.** **378/57**

Correspondence Address:

Richard F. Giunta
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, MA 02210-2206 (US)(57) **ABSTRACT**(73) Assignees: **L-3 Communications Security & Detection; Systems, Inc.**, Woburn, MA(21) Appl. No.: **10/971,453**(22) Filed: **Oct. 21, 2004****Related U.S. Application Data**(63) Continuation-in-part of application No. 10/677,976,
filed on Oct. 2, 2003.(60) Provisional application No. 60/415,391, filed on Oct.
2, 2002.

An embodiment of the invention is directed to a computed tomography device, comprising a tunnel to receive baggage, an x-ray source providing an x-ray beam that intersects the tunnel and has a beam angle of 120°, a gantry that oscillates relative to the tunnel through an oscillation angle that equals 270°, and a plurality of detectors. The plurality of detectors are mounted to the gantry and adapted to receive x-rays from the x-ray source. In addition, the plurality of detectors are arranged in a horseshoe-shaped configuration in which at least one first detector is located a furthest distance from the x-ray source and at least one second detector is disposed on each side of the at least one first detector and is disposed closer to the x-ray source than the at least one first detector.

